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COUNTRY
HOUSE
LIGHTING.

BY

ALLEN -
LIVERSIDGE
LIMITED.

1. $\frac{1}{2} \times 10^{-3}$ mole
2. 10^{-3} mole
3. 10^{-4} mole

4. 10^{-5} mole
5. 10^{-6} mole
6. 10^{-7} mole

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Country House Lighting.

Where there is no electric or coal-gas public main to draw from, the occupier of a country house has to solve the problem of lighting from an entirely independent point of view, uninfluenced by any consideration save that of intrinsic merit and suitability for the particular requirements. His range of choice, at the present time, will be confined to three systems, namely, Electricity, Petrol Air Gas and Acetylene; for the installation of a private coal-gas plant with its huge retorts and gas-holders, or, on the other hand, the use of oil lamps, with their excessive heat, messiness and inconvenience, are not to be thought of in these days of labour trouble and labour-saving devices.

To assist the reader in making a choice we would ask the privilege of placing before him the following alternative propositions in epitomized form :



If the acme of convenience and decorative effect is the sole consideration, regardless of expense or trouble, or effect on the eyesight, then undoubtedly his choice should be Electricity.

Again, if heating and cooking by gas, instead of coal, are the prime requisites, and if, on the lighting side, the heat, deterioration and breakages of mantles are not considered as drawbacks, then we would recommend, as an alternative to Electricity and Acetylene, our "Aerogen" System of Petrol-Air Gas (described under separate cover).

If, on the other hand, the acme of quality of light, combined with the acme of simplicity in manufacture and use, and cheapness of initial and running cost, are the deciding factors, then undoubtedly his choice should be Acetylene.

These, then, are clean-cut propositions, which we trust will simplify the problem for the user and focus his attention on the essential points for consideration. We shall now proceed to compare in detail, but as concisely as possible, the



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merits and demerits of each system under classified headings :

INITIAL COST.

Here Acetylene has a very decided advantage over the other two illuminants. An Acetylene installation costing only £50 is equivalent in capacity to a Petrol installation costing £70, or an electric installation costing £100.

RUNNING COST.

In these days of inflated fuel prices, it is difficult to give an accurate comparison of running costs. Previous figures would form a safer basis on which to make an estimate. It is also necessary, when computing costs of running different systems, that the cost of labour, repairs and renewals should be included, or added on to the cost of fuel consumed, as in no other way is it possible to form an accurate idea of the complete cost. The following table has been carefully compiled, and includes everything except a sum for depreciation, which can safely be put at a lower figure for acetylene than for the other systems of illumination.

ANNUAL RUNNING COSTS OF
VARIOUS LIGHTING SYSTEMS,
BASED ON PRE-WAR FIGURES.

Lights or Burners.	Electric Light.	Petrol Air Gas.	Acetylene.
25	20 0 0	17 0 0	15 0 0
36	25 0 0	23 0 0	20 0 0
50	30 0 0	30 0 0	25 0 0
100	50 0 0	55 0 0	45 0 0

In the above calculations no account has been taken of the value for many uses of the carbide residue from an Acetylene Plant.

COST OF REPAIRS.

This is a more serious item in the case of Petrol or Electric Plants owing to the number of moving parts which require frequent adjustment or renewal. Then again, with Electric Plants a set of storage cells, for storing current when the engine is not running, is necessary. The cost of these cells is a heavy item, and





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they have to be renewed every 6 to 8 years.

An Acetylene plant is so simple in construction and working that, should it require repair (an unlikely contingency), the local plumber can easily do the necessary work. This is an important consideration.

SIMPLICITY OF WORKING.

An Acetylene installation has a distinct advantage in the fact that no skilled labour is required. After a few minutes instruction it is possible for anyone to recharge the plant with perfect security. In a number of cases lady clients who have been temporarily without assistance have recharged the plants themselves, although unaccustomed to the work, and have experienced no difficulty whatever. Petrol-Air Gas, and above all Electric Lighting require more or less skilled attention.

QUALITY OF LIGHT.

This is very important; and here Acetylene scores heavily over all its competitors.



Independent light tests have been made, with the view of determining the length of time one could read without eye strain. The experiments were made over a long period and a number of persons, all of whom had defective eyesight, were given books to read over fixed periods with different illuminants. It was found that it was possible to read with the Acetylene light twice as long without straining the eye, as compared with the other forms of light tested. Strange to say, the next best light for reading was found to be the old colza oil, or "Moderator" lamp. Electricity, coal-gas and petrol-gas, were low down in the scale.

Another point to be considered in connection with the effect on eyesight is the variation in candle power. Enough light, but not an excess of light is the ideal one should follow in lighting a residence. It is obvious that if the light varies in candle power at different times it is necessary in the first instance to instal lights of a higher candle power than would be required if there were no variation. This is an inherent defect with all



forms of lighting, except acetylene. An electric bulb may give a light of 50 candle power when new, but the candle power will gradually drop to little more than half before it is replaced with a new bulb. Coal-gas and Petrol-gas, which require the use of mantles have the same defect. As the mantle begins to wear the light decreases.

This deterioration does not occur with Acetylene. The gas itself burns brilliantly without the aid of any mantle. Each burner is constructed to pass a fixed volume of gas, and the resulting candle power is always the same. The comfort and healthfulness of this uniformity of candle power is beyond question. It has also its economical aspect, as with electric light or petrol-air gas larger bulbs or burners than are necessary must be provided at the start, thus increasing the cost of consumption.

A more detailed discussion of the quality of Acetylene both as a lighting and heating medium will be found in our pamphlet entitled "The Romance of Acetylene."



A-L ACETYLENE PLANT



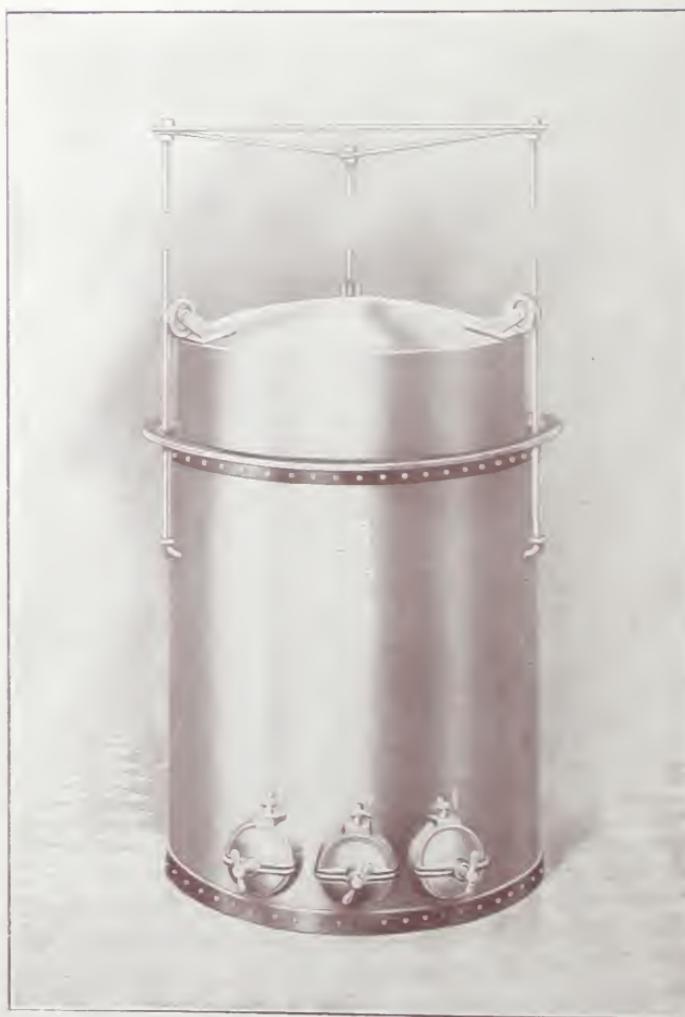
No. of Plant.	Carbide Capacity.	Approximate No. of 24 C. P. Burners for a period of 7 hours.	Price Complete with Purifier and Spare Carbide Trays.
B 1	7 lbs.	10	£22 0 0

A-L ACETYLENE PLANT



No. of Plant.	Carbide Capacity.	Approximate No. of 24 C.P. Burners for a period of 7 hours.	Price Complete with Purifier and Spare Carbide Trays.
B 2	14 lbs.	20	£ 36 0 0
B 3	28 ,,	40	45 5 0
B 4	56 ,,	80	60 10 0
B 5	84 ,,	120	73 10 0

A-L ACETYLENE PLANT



No. of Plant.	Carbide Capacity.	Approximate No. of 24 C.P. Burners for a period of 7 hours.	Price Complete with Purifier and Spare Carbide Trays.
B 6	126 lbs.	180	91 0 0

Larger Sizes Quoted for on application.

Points to be Considered
in the
Selection of an Acetylene Plant.

(1). The Working Parts must be truly Automatic and Entirely Free from Liability to Derangement.

(2). The Construction must be Strong, Simple and Compact.

(3). A Perfect System of Purification must be employed.

We will now proceed to show that the A-L Plants conform in every way to the above essential conditions :—

SIMPLICITY AND CERTAINTY
OF ACTION.

An automatic control of water supply is obtainable by one of three methods only, viz., by



the use of (1) Valves, (2) Displacement Chambers, (3) A-L Flexible Tube.

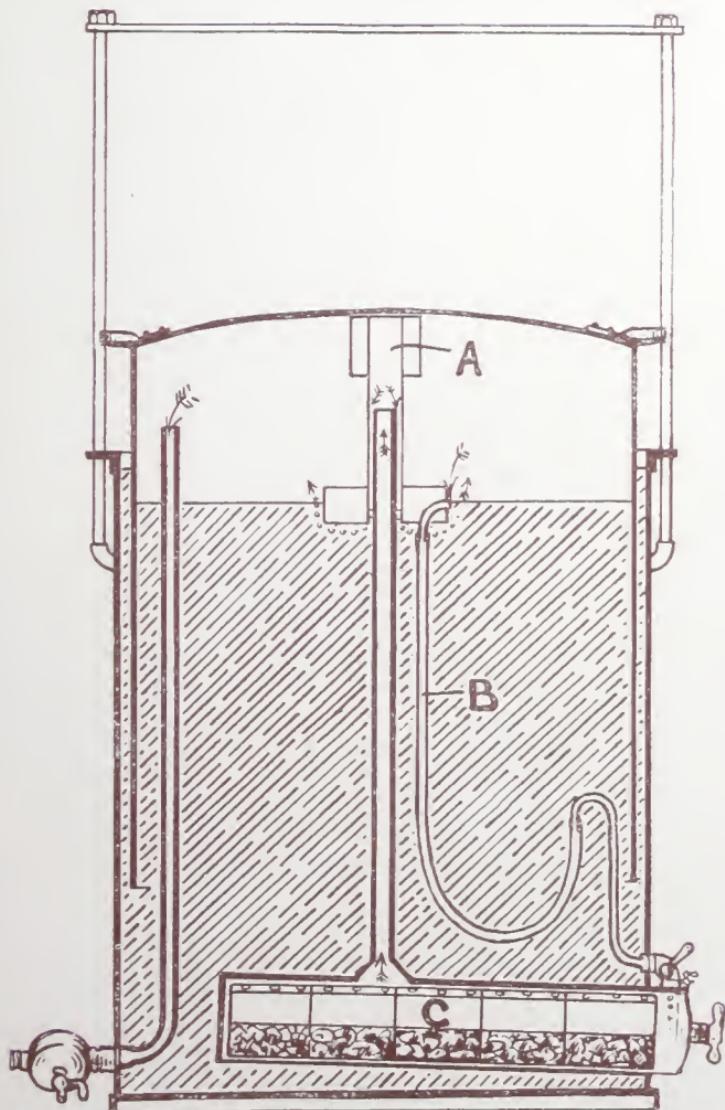
The superiority of the A-L Flexible Tube is at once obvious being neither liable to clog and become inoperative as in the case of Valves, nor productive of variation in pressure inseparable from the use of Displacement Chambers. Furthermore, it admits water to the carbide cylinder, not only when it is wanted, but as it is wanted, varying automatically from a trickle to a steady stream, according to the slow or rapid descent of the gas-bell with the slow or rapid consumption of gas.

EXPLANATION OF DIAGRAM.

Water is fed to the carbide chamber (C) through the flexible tube (B). The upper end of this tube is normally held above the water level by the float (A). As the gas-bell descends this float is submerged so that water passes through the tube to the carbide chamber, and more gas is generated.



SECTIONAL DIAGRAM OF A-L PLANT.



When the gas-bell rises, the float again lifts the end of the tube above the water level, so that no more water is admitted until more gas is required. The float (A) also acts as a cover for the gas outlet pipe, and as it rises and falls with the changing water level in the tank, it provides a constant water seal scrubber for the gas entering the gas holder from the carbide chamber. It also acts as a water-seal check against the back flow of gas from the holder when the carbide chamber is opened for recharging, and at the same time it is so designed that it effectually prevents any syphoning of water from the tank, which often occurs where the gas outlet pipe itself is sealed in the water.

VERY IMPORTANT FACTS.

- (1). With the flexible tube feed there can never be any overmake of gas, as the make of gas is regulated exactly to the requirements whether large or small; and it



must be remembered that any plant which wastes gas is very expensive in the end, whatever its first cost.

[2]. With our specially designed float seal over the gas outlet pipe there can never be any siphoning of water back through the gas pipe when suction is produced in the generating chamber with the withdrawal of the carbide tray. Any practical user of acetylene will appreciate the value of this improvement.

STRENGTH OF CONSTRUCTION.

The materials used in the A-L Plant are the very best and the workmanship is most carefully executed. The angle-iron rings, which are used as a basis of construction, although they add considerably to the cost of manufacture, fully justify their use in the great strength and rigidity which they give to the plant.



The Sheet metal in the body of the plant is galvanised mild steel strengthened with band iron and cross bar stays at the bottom of the tank and gas-bell. Galvanised bolts and nuts are used instead of rivets, and tank seams are oxy-acetylene welded. Every plant is thoroughly tested before leaving our works, and perfect working is guaranteed.

EFFICIENCY OF PURIFIER.

The A-L System of purification is extremely simple and efficient. The gas is first sub-divided into the smallest streamlets by the perforated bottom, and is then made to percolate through the entire mass of material from the bottom upward. The gas is thus mechanically scrubbed and chemically cleansed of all impurities.

The work of recharging is reduced to a minimum, and leaves no excuse for neglect.



THE A-L PURIFIER.



Installation of Piping.

The work of piping is a very important part of an installation. It is most essential that this should be carefully done by men fully experienced in this class of work, and that due regard should be given to the proper bore and ramification of the piping so that there is an even pressure of gas throughout the house. We have a staff of fitters, including some who have been with us from the commencement of our business, who have had a wide experience in piping every class of house. We are prepared to carry out successful piping installations, no matter how old or how elaborate the decorations may be.

The piping we use is always of the highest possible quality, and is specially tested before being used. Where the piping work is done before the decorations are completed nothing whatever is visible, and even where the house is already decorated and furnished most of the pipes can be run between the floors and walls, and small brass tubing can be fixed on the face of the walls in



such a manner as to be scarcely noticeable. When the room is subsequently redecorated, this tubing can be sunk into the wall and plastered over. Control taps can be arranged in convenient positions, so that the whole or any section of the lights may be turned off when not required.

THE ACETYLENE PLANT HOUSE.

The Plant should be placed in a small shed outside the main building, and, to comply with the insurance regulations, there must be no direct communication. The shed may be a lean-to structure, or isolated at any convenient distance from the house. In the majority of instances it is found that an existing shed will answer the purpose quite well. A brick-built gas house with cement floor is preferable, when available ; but an iron building with ordinary floor is also quite suitable, if the walls and ceiling are lined with wood as a protection against frost. A window should be provided for light, and the house should be ventilated at the top. The minimum size of shed



or gas house for the various size plants is given below :—

DIMENSIONS REQUIRED FOR GAS HOUSE.

No. of Plant.	Lights.	Length.	Width.	Height to Eaves.	Width of Doorway.
		ft. ins.	ft. ins.	ft. ins.	ft. ins.
B1	10	6 6	4 6	6 6	2 6
B2	20	7 0	5 0	7 6	2 6
B3	40	8 0	6 0	7 6	3 0
B4	80	9 0	7 0	8 0	3 6
B5	120	9 6	7 6	8 0	3 8
B6	180	10 0	8 0	8 0	4 0

DISPOSITION OF LIGHTS.

The advice of the Company's engineer is always at the service of our clients, and considerable economies are often effected by careful planning. There are many cases where, for example, one light will often serve the purpose of two, by carefully selecting its position. Moveable table lamps are not always thought of, and yet by providing extra wall plugs in the principal rooms, a moveable light is always available whenever





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required. These wall plugs are also convenient for attaching portable gas rings if desired.

FITTINGS.

It is important that the fittings selected should be of a type suitable for each individual room, according to the purpose for which it is used, and they should also harmonise with the surrounding decorations. Being actual designers and manufacturers of fittings, the Company is in a position to suit any individual taste, and to prepare special designs.

FABROGLAZE SHADES, ETC.

We have recently introduced an entirely new form of shade which possesses many advantages over the usual type of silk shade. By placing the silk or other material between glass, a shade is produced which is absolutely unsoilable and fireproof and yet retains all the delicate tints and colours of the fabrics. These Fabroglaze shades may be made to suite any style or period of furniture or any general scheme of colouring, and the interposed fabric can be changed at any time by the user to suit changes in other decorations.

Our various Fabroglaze products are dealt with in a separate pamphlet.





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From the
HUNDREDS OF USERS OF
A-L PLANTS.

We select the following representative names :—

Duke of Argyll,
Marquis of Salisbury,
Marquis of Normanby,
Lord William Cecil,
Lord Aldenham,
Lady Gordon-Cumming,
Lady Colville,
Lady Cooper,
Lady Encombe,
Lady Proby,
Lady Mellraith,
Sir A. P. Ashburnham Clement, Bart,
Sir J. Fortescue-Flannery, Bart,
Sir John Denison-Pender,
Sir Edwin Cornwall,
Sir Arthur Wynne,
Sir Ronald Lane,
Sir Paget Bowman,
Sir Sidney Lea,
Sir Arthur Warren,
Hon. Gilbert Hastings,
Hon. Terence Bourke,
Hon. George Peel,
etc., etc.





No. 2595.
SIX LIGHT CANDLE PENDANT
In steel, bronze or antique brass.
Price £10 10 0.



No. 2063.
TWO LIGHT PENDANT in
wrought iron.
Price 35/- (Globes extra.)



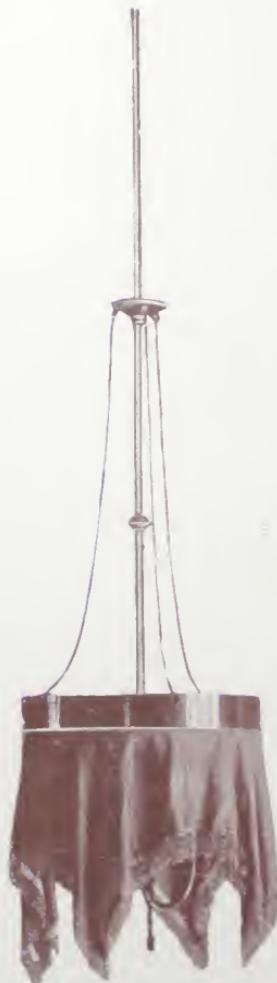
No. 2104.
CANDLE BRACKET.
In Wrought Iron 27/-
In Antique Brass 42/-



No. 5230.
CANDLE BRACKET.
Ormolu 115/-



No. 2341.
PENDANT.
In Armour Bright Iron.
Price 65/-



No. 2802.
SINGLE LIGHT PENDANT.
In Antique Brass including Flounce.
Price 62/-



No. 2625.
TWO LIGHT "GEORGIAN" BRACKET
In Brass 155/-



No. 5028a.
CANDLE BRACKET.
In Dutch Brass 95/-



No. 5057
PENDANT.
In antique brass with 18ins. silk shade.
Price 75/-



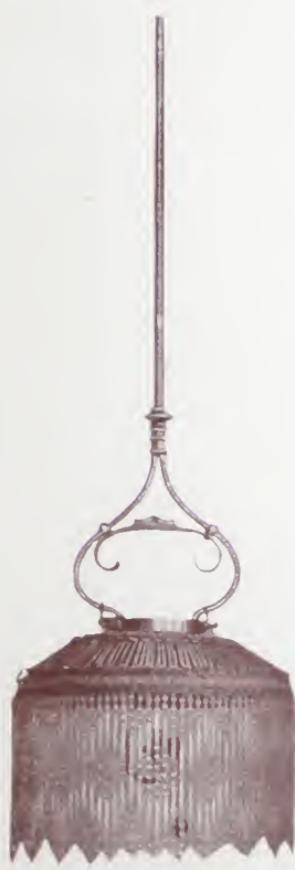
No. 2119
PENDANT.
In polished brass.
Price 35/-



No. 2087
TWO LIGHT "LOUIS
XV" BRACKET.
Gilt finish 75/-



No. 5622
CANDLE BRACKET.
Ormolu 52/-



No. 2279a

ONE LIGHT PENDANT.
Wrought Iron with bead fringe shade.
Price 37/6



No. 6415

TWO LIGHT CEILING FITTING
In antique brass.
Price 95/-



No. 5035a
BRACKET.

In antique brass 27/-
In antique silver 35/-



No. 2573
BRACKET.

In Wrought Iron 17/6
In Antique Brass. 27/6



No. 2406
BRACKET.

In Wrought Iron 17/6
In Antique Brass 21/-



No. 5044a.
TABLE LAMP.
In armour bright 35/-
In antique brass 45/-
(Shade extra)



No. 5027
WALL LANTERN.
In wrought Iron 32/6



No. 5417
TABLE LAMP.
In antique silver 55/-
(Shade extra)



No. 5416
TABLE LAMP.
In polished brass.
Price 28/- (Shade extra)



No. 2913
TABLE LAMP.
In armour bright 35/-
In antique brass 42/-
(Shade extra)



"FABROGLAZE" DISH LIGHT.

In Oak or Mahogany.

Price 97/6



"FABROGLAZE" TABLE LAMP.
In Brass or Bronze.
Price 42.-



No. 2482.
"FABROGLAZE" SHADE.
For Pendant or Table Lamp.
Price 10/6



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TEMPORARY LIGHTING BY PORTABLE ACETYLENE LAMPS.

In the case of Bungalows, Shooting Boxes and other buildings which are temporarily occupied, or wherever it is not desirable to instal a permanent installation, the best alternative is the adoption of A-L Portable Acetylene Lamps, which give the same high quality of light and yet can be removed at will.

The A-L Table Lamps are constructed on the same principle as the famous A-L Generators which are used with perfect results in all parts of the world. Their absolute automatic control prevents any escape of gas and maintains a steady brilliant flame.

For further designs see separate catalogue of Portable Acetylene Lamps.





T.L. 20

A Beautifully Glazed ROYAL BLUE DOULTON WARE WATER CONTAINER. Metal parts of oxydised silver the whole presenting a fine appearance.

Price 57/6 (Shade extra)



T.L. 14

A PORCELAIN WATER CONTAINER of Bretby Art Pottery, with figures in bas relief. Metal work of polished brass.

Price 34/6 (Shade extra)



T.L. 12

A Splendidly MODELLED LAMP suitable for use in any drawing room. Finished in rich matt gold throughout Handsome appearance.

Price 72/6 (Shade extra)





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SHOWROOM.

In our showroom at 106, Victoria Street, will be found a varied assortment of Electric, Acetylene, Coal-gas and Petrol-air gas fittings, as well as heating and cooking appliances—in fact, all accessories connected with lighting or heating installations.

FACTORIES.

The Company has well equipped Factories in the following places :

LONDON—

Philip Road, Rye Lane,
Peckham, S.E.

Shelgate Road,

Clapham Junction, S.W.

Wyndham Road, Camberwell, S.E.

GLASGOW—

Alexandra Parade.

HULL—

Main Street, Sculcoates.

BELFAST—

Sydenham Road.

Also Branches at

SYDNEY, N.S.W. and

NEW YORK, U.S.A.

RONALD MASSLEY, 25 KNIGHTTRIDGE STREET, E.C.4



